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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,457	08/25/2006	Petra Cirpus	13987-00020-US	8604
23416 7590 12/10/2009 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899				
EXAMINER				
MCILWAIN, ELIZABETH F				
ART UNIT		PAPER NUMBER		
1638				
MAIL DATE		DELIVERY MODE		
12/10/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/590,457

Applicant(s)

CIRPUS ET AL.

Examiner

Elizabeth F. McElwain

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-45 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The amendment and response to restriction filed September 30, 2009 have been entered.

Claims 1-36 and 38-63 are pending.

Upon reconsideration of the claims, the previous restriction requirement is withdrawn and the following restriction requirement is set forth.

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-6 and 10-14, drawn to a process of producing compounds of formula I by introducing into a plant coding sequences for a delta-6 desaturase, a delta-6 elongase, a delta-5 desaturase, a delta-5 elongase and a delta-4 desaturase.
If this group is elected, then applicant is also required to elect one SEQ ID NO from claim 6. If nucleic acid sequences and amino acid sequences are recited, then elect the nucleic acid sequence and corresponding amino acid sequence.

Group II, claim(s) 7, drawn to a process of producing fatty acids by introducing into a plant coding sequences for a delta-6 desaturase, a delta-6 elongase, a delta-5 desaturase, a delta-5 elongase and a delta-4 desaturase and additionally an omega-3 desaturase.
If this group is elected, then applicant is also required to elect one one SEQ ID NO.

Group III, claim(s) 8, drawn to a process of producing fatty acids by introducing into a plant coding sequences for a delta-6 desaturase, a delta-6 elongase, a delta-5 desaturase, a delta-5 elongase and a delta-4 desaturase and additionally a delta-12 desaturase.
If this group is elected, then applicant is also required to elect one one SEQ ID NO.

Group IV, claim(s) 9, drawn to a process of producing fatty acids by introducing into a plant coding sequences for a delta-6 desaturase, a delta-6 elongase, a delta-5 desaturase, a delta-5 elongase and a delta-4 desaturase and additionally another protein of the fatty acid biosynthetic pathway.
If this group is elected, then applicant is also required to elect one of the proteins listed.

Group V, claim(s) 15-17, 24-35, 38 and 44, drawn to a process for producing compounds of formula I by introducing into a plant coding sequences for a delta-6 desaturase, a delta-6 elongase, and a delta-5 desaturase.

If this group is elected, then applicant is also required to elect one SEQ ID NO from claim 15 for each enzyme activity. If nucleic acid sequences and amino acid sequences are recited, then elect the nucleic acid sequence and corresponding amino acid sequence.

Group VI, claim(s) 18-20 and 39, drawn to a process for producing compounds of formula I by introducing into a plant coding sequences for a delta-6 desaturase, a delta-6 elongase, a delta-5 desaturase and a delta-12 desaturase.

Group VII, claim(s) 21-23 and 40, drawn to a process for producing compounds of formula I by introducing into a plant coding sequences for a delta-6 desaturase, a delta-6 elongase, a delta-5 desaturase and a delta-5 elongase.

If this group is elected, then applicant is also required to elect one SEQ ID NO from claim 22 for each enzyme activity. If nucleic acid sequences and amino acid sequences are recited, then elect the nucleic acid sequence and corresponding amino acid sequence.

Group VIII, claim(s) 36 and 45-46, drawn to oil.

Group IX, claim(s) 47, drawn to a process of mixing oils.

Group X, claim(s) 48, drawn to feed, foodstuffs, cosmetics or pharmaceuticals.

Group XI, claim(s) 49, 52, 53, 61 and 63 are drawn to an isolated nucleic acid encoding a delta-5 elongase of SEQ ID NO: 197.

If this group is elected, then applicant is also required to elect one additional biosynthetic gene of claim 53.

Group XII, claim(s) 50, 54, 55, 56 and 58, drawn to an isolated nucleic acid encoding a delta-6 elongase of SEQ ID NO: 199.

If this group is elected, then applicant is also required to elect one additional biosynthetic gene of claim 58.

Group XIII, claim(s) 51, 57, 59, 60, 62, drawn to an isolated nucleic acid encoding a delta-6 desaturase of SEQ ID NO: 201.

If this group is elected, then applicant is also required to elect one additional biosynthetic gene of claim 59.

1. The inventions listed as Groups I-XIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special

technical features for the following reasons: Drexler et al (J Plant Physiol 160: 779-802, July 2003 in IDS filed August 25, 2006) teaches a process of producing compounds of formula I by introducing into a plant coding sequences for a delta-6 desaturase, a delta-6 elongase, a delta-5 desaturase, a delta-5 elongase and a delta-4 desaturase (pp 794-795). Therefore, said process does not constitute a special technical feature to link the inventions of Groups I-XIII. The inventions of II-VII each are processes requiring different combinations of genes. Group VIII is drawn to oil, which can be made by a different method and does not require the process and genes of Groups I-VII, and Group IX is drawn to mixing said oil, which also does not require the processes of Groups I-VII. Group X is drawn to feed and other products that do not require any of the processes of Groups I-VII. Groups XI-XIII are drawn to isolated nucleic acids encoding specified enzyme activities, which lack a corresponding special technical feature with any of Groups I-X, and each of said groups is distinct one from each of the other, wherein each is drawn to a nucleic acid encoding a different functional activity.

Applicants are reminded that nucleotide sequences encoding different proteins are structurally distinct chemical compounds and are unrelated to one another. These sequences are thus deemed to normally constitute **independent and distinct** inventions within the meaning of 35 U.S.C. 121. Absent evidence to the contrary, each such nucleotide sequence is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.141 et seq. This requirement is not to be construed as a requirement for an election of species, since each nucleotide and amino acid sequence is not a member of single genus of invention, but constitutes an independent and patentably distinct invention.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and the requirement for different searches, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth F. McElwain whose telephone number is (571) 272-0802. The examiner can normally be reached on increased flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EFM

/Elizabeth F. McElwain/
Primary Examiner, Art Unit 1638